IN THE CLAIMS

Please amend the claims as follows:

1. (original) A device for the three-dimensional reconstruction of a moving object in a body volume, comprising a memory which contains a series of two-dimensional projection photographs ($A_1$, $A_2$, $A_n$, $A_N$) of the body volume from different directions, as well as a data processing unit which is coupled to the memory and which is set up to execute the following steps:

a) Segmentation of the image ($Pr_n(Q)$) of at least one feature point (Q) of the object or its surroundings in the projection photographs ($A_n$);

b) Specification of a spatial reference position ($Q_0$) for each feature point (Q);

c) Calculation of transformations ($\Sigma_n$, $\sigma_n$) of the object space and of the projection photographs ($A_n$), after the use of which the projection of the transformed reference position coincides with the respective transformed image of the feature point;

d) Three-dimensional reconstruction of the object from the projection photographs ($A_n$) with the aid of the calculated transformations ($\Sigma_n$, $\sigma_n$).

2. (original) Device as claimed in claim 1, characterized in that the spatial reference position ($Q_0$) of a feature point (Q) is reconstructed in step b) from two projection photographs that originate from a similar state of the body volume, in particular from a heartbeat phase of the same type.

3. (original) Device as claimed in claim 1, characterized in that the transformation ($\Sigma_n$) of the object space or the transformation ($\sigma_n$) of the projection photographs is the same image.

4. (original) Device for the three-dimensional reconstruction of an object (5) in a body volume that is subject to cyclical self-movement, comprising a memory (3) which contains a series of two-dimensional projection photographs ($A_n$) of the body volume from different directions together with the respective corresponding values of a parameter ($E_n$) that characterizes the cyclical self-movement, as well as a data processing unit (4) which is coupled to the memory (3) and which is set up to execute the following steps:
a) Segmentation of the image ($R_n$, $Q_n$) of at least one feature point (R, Q) of the object (5) in the projection photographs ($A_n$);
b) Classification of the projection photographs ($A_n$) into classes ($K_p$) which each correspond to a given phase ($E_p^{Ci}$) of the cyclical self-movement;

c) Three-dimensional localization of said feature point (R, Q) for each of the said classes ($K_p$) from at least two projection photographs ($A_{n1}$, $A_{n2}$) of this class;

d) Calculation of three-dimensional transformations ($\Sigma_{p\_m}$) which describe the movement ($S^R_{p\_m}$, $S^Q_{p\_m}$) of the localized feature point (R, Q) between different phases (p, m) of the cyclical self-movement;

e) Three-dimensional reconstruction of the object (5) from the projection photographs ($A_n$) with the aid of the calculated transformations ($\Sigma_{p\_m}$).

5. (currently amended) Device as claimed in claim 1 ~~or 4~~, characterized in that the transformations ($\sigma_n$, $\Sigma_n$, $\Sigma_{p\_m}$) comprise a translation, a rotation, a dilation and/or an affine transformation.

6. (currently amended) Device as claimed in claim 1 ~~or 4~~, characterized in that it includes an input unit for interactive segmentation in step a).

7. (currently amended) Device as claimed in claim 1 ~~or 4~~, characterized in that it includes an image-producing device (1) for producing the series of two-dimensional projection photographs ($A_n$)

of the body volume, preferably an X-ray apparatus (1) and/or an NMR device.

8. (currently amended) Device as claimed in claim 1~~3~~4, characterized in that it includes a sensor device (2) for recording a parameter ($E_n$) that characterizes a cyclical self-movement of the body volume in parallel with the production of the projection photographs, wherein the sensor device preferably comprises an electrocardiograph device (2) and/or a respiration sensor.

9. (original) Method for the three-dimensional reconstruction of a moving object in a body volume based on a quantity of data which contains a series of two-dimensional projection photographs ($A_1$, $A_2$, $A_n$, $A_N$) of the body volume from different directions, comprising the steps:

a) Segmentation of the image ($Pr_n(Q)$) of at least one feature point (Q) of the object or its surroundings in the projection photographs ($A_n$);

b) Specification of a spatial reference position ($Q_0$) for each feature point (Q);

c) Calculation of transformations ($\Sigma_n$, $\sigma_n$) of the object space and of the projection photographs ($A_n$), after the use of which the projection of the transformed reference position coincides with the

transformed image of the feature point each time;

d) Three-dimensional reconstruction of the object from the projection photographs ($A_n$) with the aid of the calculated transformations ($\Sigma_n$, $\sigma_n$).

10. (original) Method for the three-dimensional reconstruction of an object (5) in a body volume that is subject to a cyclical self-movement, based on a quantity of data which contains a series of two-dimensional projection photographs ($A_n$) of the body volume from different directions together with the respective corresponding values of a parameter ($E_n$) that characterizes the cyclical self-movement, comprising the steps:

a) Segmentation of the image ($R_n$, $Q_n$) of at least one feature point (R, Q) of the object (5) in the projection photographs ($A_n$);

b) Classification of the projection photographs ($A_n$) into classes ($K_p$) which each correspond to a given phase ($E_p^{Cl}$) of the cyclical self-movement;

c) Three-dimensional localization of said feature point (R, Q) for each of the said classes ($K_p$) from at least two projection photographs ($A_{n1}$, $A_{n2}$) of this class;

d) Calculation of three-dimensional transformations ($\Sigma_{p\_m}$) which describe the movement ($S^R_{p\_m}$, $S^Q_{p\_m}$) of the localized feature point (R, Q) between different phases (p, m) of the cyclical self-

movement;

e) Three-dimensional reconstruction of the object (5) from the projection photographs ($A_n$) with the aid of the calculated transformations ($\Sigma_{p\_m}$).